G.M.T.	Angle of Position of ♃'s Axis.	Longitude of ♃'s Meridian directed to the Earth.	Diff.	Latitude of Earth | Sun above ♃'s Equator.		Annual Parallax.	Equat. Diam.	Greatest Phase.	Corr. of Long.
1879.	°	°		°	°	°	″	″	°
Dec. 11	336·17	62·74		1·17	1·62	11·10	38·31	·358	·54
			1·92						
16	336·07	94·66		1·18	1·64	10·86	37·75	·339	·51
			1·88						
21	335·96	126·54		1·20	1·66	10·56	37·22	·315	·49
			1·83						
26	335·85	158·37		1·22	1·68	10·21	36·72	·291	·45
			1·80						
31	335·74	190·17		1·24	1·70	9·80	36·25	·264	·42
			4351·76						
1880.									
Jan. 5	335·63	221·93		+1·26	+1·72	+9·35	35·81	0·238	−0·38

Assumed daily rate of rotation 870°·60. The "annual parallax" is the difference of the Jovicentric longitudes of the Sun and the Earth, reckoned in the plane of *Jupiter's* equator. The last column gives the correction which is to be applied to the "longitude of ♃'s meridian directed to the Earth," in order that it may refer to the meridian which bisects the illuminated disk.

The inclinations γ and the ascending nodes Γ of the orbits of the four satellites in reference to the plane of *Jupiter's* equator are the following, the nodes being reckoned from the descending node of the equator on the planet's orbit, or from the vernal equinox of *Jupiter's* northern hemisphere:—

	Sat. I.		Sat. II.		Sat. III.		Sat. IV.	
	γ_1	Γ_1	γ_2	Γ_2	γ_3	Γ_3	γ_4	Γ_4
1879.	°	°	°	°	°	°	°	°
Feb. 19	0·0097	17·3	0·4597	25·27	0·1908	268·20	0·3246	329·61
April 20	·0097	14·8	·4605	23·25	·1902	267·77	·3249	329·54
June 19	·0098	12·5	·4614	21·23	·1896	267·38	·3253	329·49
Aug. 18	·0099	10·1	·4624	19·21	·1890	267·00	·3257	329·45
Oct. 17	·0100	7·9	·4634	17·20	·1883	266·64	·3262	329·44
Dec. 26	0·0102	5·7	0·4644	15·19	0·1876	266·30	0·3267	329·46

On the Desirability of photographing Saturn and Mars at the next Conjunction. By A. A. Common, Esq.

In the December 1878 Number of the *Notices* of this Society the particulars of the conjunction of *Saturn* and *Mars* on June 30, 1879, are given by the Astronomer Royal.

I trust that those astronomers who can will take advantage of this excellent opportunity of testing the relative actinic intensity of light of the two planets.

As they can then be taken under the same conditions, and if differently prepared plates are used—that is the ordinary wet plate and iodised collodion, and those dry plates that are more

sensitive to the red rays—the different effects of the colours of the planets might be made apparent.

Perfection of image would not be of so much importance as the effect in producing chemical action on the plate.

To show the possibility of doing this, I beg to lay before the Society two photographic plates, one with a row of pictures of *Jupiter* (showing the effect of a slight difference in the exposure on the image both as to size and density), and the other a picture of *Saturn*, all taken with an exposure of about $2\frac{1}{2}$ seconds in the case of *Saturn*, and still less in the case of *Jupiter*, by an eighteen-inch silver-on-glass Newtonian telescope.

March 1879.

Note on Large Telescopes, with suggestions for mounting Reflectors.

By A. A. Common, Esq.

The question how an increase of telescopic power may be best attained is well worth discussing, and I propose to offer some suggestions how an advance on our present means may be most readily made.

The question turns on the relative capacity of the refracting and reflecting telescope to give this increase,* and without attempting to decide which kind will eventually be found best, it is possible, I think, to show that practically the advantage is on the side of the reflector.

Although up to a certain size (taking 26 inches as the largest yet made) the refractor equals or surpasses the reflector in light-grasping power, and has certain advantages in use, as, for instance, the permanence of adjustment, readiness at all times for work, and freedom from great atmospheric disturbance, and, for its disadvantages, great length and chromatic aberration which prevents its complete use in photographic and spectroscopic work; while the reflector has, for its advantages, shorter focal length and total absence of chromatic aberration, and, for its disadvantages, want of permanency of adjustment, greater atmospheric disturbance, and a reflecting surface that requires constant attention and frequent renewal; these advantages and disadvantages do not much affect the question, for it is not on these grounds that it can be decided.

For at this point (viz. a 26-inch refractor or the equivalent sized reflector) the difficulties in producing the two kinds, or, in

* Since this paper was drafted and the conditions laid down, I have received from the author, Mr. Howard Grubb, a copy of his paper "On the Great Telescopes of the Future," published in the *Scientific Transactions* of the Royal Dublin Society, a paper I read with much interest, though I do not agree with him on several points. In it this question is most fully discussed; and although the writer does not advocate any particular kind, there is a very decided leaning to the reflector of speculum metal, the reflecting power of which he hopes to be able to improve.